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ABSTRACT

Currently school organizations are under pressure to achieve excellence. There is no exception to this pressure in the schools of Hong Kong. Research into organizational cultures of excellent schools in Hong Kong is seeking evidence for others striving for excellence. Excellent schools are defined as few schools that have many aspects that outweigh their counterparts to a great extent. This study adopted an "etic" view on organizational cultures, in contrast to an "emic" view. An "etic" perspective of culture allows the quantitative assessments of organizational cultures across schools. Furthermore, it renders possible comparisons between the characteristics of excellent schools, and that of their counterparts. A questionnaire method was employed in this study. An instrument, "School Values Inventory" (SVI), was created for the study. Based on data collected from 554 teachers from a randomly selected sample of 44 secondary schools in Hong Kong, a "Linear Structural Relationships" (LISREL), a four-factor model of organizational values in schools, was developed. The model delineates that bureaucratic linkage, cultural linkage, tight coupling, and loose coupling are the major forces that bind teachers together in school organizations. An "Organizational Culture Index" (OCI) also was created as indicative of the strength of organizational cultures of schools. While the four binding forces demonstrate cultural contents in schools, the OCIs show their strength. Three excellent schools were identified out of the 44 schools in the sample. Organizational cultures of the 44 schools were described in terms of OCI and the four major binding forces. Characteristics of the three identified excellent schools were analyzed according to their cultural strengths and contents. All three schools had strong organizational cultures. Two distinctive types were identified in the excellent schools: (1) professional culture; and (2) bureaucratic-professional culture. One school relied heavily on cultural linkage and loose coupling as management strategies to bind people together. The other two schools were strong in bureaucratic linkage and cultural linkage. Contains 3 tables, 6 figures, and 36 references. (BT)

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by Nicholas Sun-Keung Pang

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**Annual Meeting of the American Educational Research Association**

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# *Organizational Cultures of Excellent Schools in Hong Kong*

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## ABSTRACT

Currently school organizations are under pressure to achieve excellence. There is no exception to this pressure in the schools of Hong Kong. The failures in the Hong Kong schools may be due to the fact that they are loosely coupled systems in which there are problematic goals, unclear technology and fluid participation. Nevertheless, some researchers implied that organizational culture is the "glue" that holds loosely coupled systems together and suggested that effective administrators in a loosely coupled system could and should make full use of culture management to tie the system together. Although excellent schools are not models that can be duplicated and mass produced, the author launched a research into the organizational cultures of excellent schools in Hong Kong to seek evidence for others striving for excellence.

This study adopted an *etic* view on organizational cultures, as contrast to an *emic* view. Since excellent schools are defined as "few schools which have many aspects that outweigh their counterparts to a great extent." An *etic* perspective of culture allows the quantitative assessments of organizational cultures across schools and renders comparisons between the characteristics of excellent schools and that of their counterparts possible. This study referred to "shared values" within organizations as the appropriate cultural constructs which permit analysis of organizational culture across units.

A questionnaire method was employed in this study. An instrument, *School Values Inventory* (SVI), was created and developed for this study. Based on data collected from 554 teachers from a randomly selected sample of 44 secondary schools in Hong Kong, a LISREL four-factor model of organizational values in schools was developed. The model, precisely and concisely, delineates that bureaucratic linkage, cultural linkage, tight coupling and loose coupling are the major forces that bind teachers together in school organizations. An *Organizational Culture Index* (OCI) was also created as indicative of the strength of organizational cultures of schools. While the four major binding forces indicate cultural contents in schools, the OCIs indicate their strength.

Three excellent schools were identified out of the 44 secondary schools in the sample. Organizational cultures of the 44 sample schools were described in terms of both the OCI (the strength) and the four major binding forces (the contents). Characteristics of the three identified excellent schools were analyzed according to their strength of cultures and the cultural contents. All three schools were found to have strong organizational cultures as indicated by their OCIs and two distinctive types of school cultures were identified in the three excellent schools in Hong Kong: "professional" culture and "bureaucratic-professional" culture. The "professional" culture identified in one of the three excellent schools indicated that while this school did not emphasize bureaucratic linkage at all and emphasized tight coupling only moderately, it relied heavily on cultural linkage and loose coupling as the strategies in the management of the school to bind people together. In the other two excellent schools, a "bureaucratic-professional" culture was identified. The culture in these two excellent schools was that they were strong in both bureaucratic linkage and cultural linkage and were both tightly and loosely coupled, although in varying degrees.

Some important implications of the study are (1) that in striving for excellence, schools should be (i) strong in organizational culture, (ii) both tightly coupled and loosely coupled, (iii) strong in cultural linkage but may or may not be strong in bureaucratic linkage; (2) that the reconciliation of the bureaucratic-professional conflicts in schools could be done by strengthening the organizational cultures; (3) no matter what were the schools' organizational cultures, strong cultures are the most important factor leading them to excellence.

**Key words: Excellent schools, organizational values, school culture, binding forces, LISREL model, Hong Kong**

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# *Organizational Cultures of Excellent Schools in Hong Kong*

The 1980s saw an interest in a search for excellence among the researchers on organizations. Similar to the trend of study on organizational cultures, the trend of study on organizational excellence began with the two books that examined the challenges that Japan posed for American industry, *Theory Z* (Ouchi, 1981) and *The Art of Japanese Management* (Pascale & Athos, 1981). The trend continued with the book that focused more closely on American industry itself, *Corporate Culture* (Deal & Kennedy, 1982) and reached an early peak with the other two books that perhaps best exemplify this trend, *In Search of Excellence* (Peters & Waterman, 1982) and *A Passion for Excellence* (Peters & Austin, 1985).

The pursuit of excellence in organizations has been widespread not only in the business field but also in education. A concern about excellent schools had become increasingly obvious towards the end of the 1980s. The earliest excellent schools movement (as a reform) was sparked by the Reagan administration's *A Nation at Risk* report (National Commission on Excellence in Education, 1983). The publication of *A Nation at Risk*: *The Imperative for Educational Reform* has generated a large number of studies of schools. Many of these studies were qualitative and described the need to change schools drastically in ways that were highly compatible with the findings of the effective schools research. Timer and Kirp (1988) in their book, *Managing Educational Excellence*, provide a full account of the educational reforms in the United States initiated since the publication of *A Nation At Risk*. Wayson and his colleagues (1988) in their book, *Up From Excellence: The Impact of the Excellence Movement on Schools*, gave the details of identification of "excellent" schools that responded to the reform policies and summarized their features as guides to actions that could be taken by other schools that wanted to improve their effectiveness.

Similarly in other countries, governments seized the initiative on educational reform toward excellence. In February 1987, a group of Singaporean school principals submitted a report to the Minister for Education entitled *Towards Excellence in Schools* (Principals' Report, 1987) based on their visits and study of selected schools in the United States of America and the United Kingdom during November/December 1986. In 1989, the then NSW Minister for Education and Youth Affairs, Terry Metherell issued the white paper on curriculum reform in New South Wales schools, that was titled *Excellence and Equity* (Metherell, 1989). A comprehensive book, *Creating An Excellent School*, was published by Hedley Beare, Brain Caldwell and Ross Millikan in 1989. Campbell and Crowther (1991, p. 15) suggested that an excellent school should also be an entrepreneurial school. Drawn from the work of contemporary writers on management, they offered ten principles that lead schools towards excellence through the establishment of an entrepreneurial culture in schools. All these signify people's dreams about and the pursuit of excellence.

*Good Schools and Excellent Schools*

In the literature, good schools and excellent schools are common terms and sometimes appear together. Some people give them more or less the same meaning, some different. We need to clarify the meanings of good schools and excellent schools before any investigation of the effects of schools.

What is a good school? Some people, indeed many parents, will say that the "feel' of the school is one of the best indicators. Most people will judge a school good or bad by their impression of school style, reputation, students' behavior inside and outside of the school, the

cleanliness of the playgrounds, success rates in academic performance and the like. However, researchers may define a good school more stringently. Silver (1994, p.2) defined that a 'good' school has always been one that by some publicly available standard has consistently achieved known goals. That standard may have to do with the attitudes or behavior of its students in tests or examination or on the playing field. Lightfoot (1983, p.24) inferred that it is not the absence of weakness that marks a good school, but how a school attends to the weakness. A good school may even show striking moments of vulnerability, inconsistency, and awkwardness. Lightfoot (1983, p.309) emphasized that the search for "good" schools is elusive and disappointing if by goodness we mean something close to perfection. It seems that, in general, something 'good' is a rough term and different people refer to different concepts of goodness in schools. Few of these judgments have involved the use of objective or sometimes even public criteria. Nevertheless, good schools in this study are defined as "those schools which have a high reputation in the community as regarded by teachers, parents, pupils and people from the community and have high achievement standards in terms of both students' academic performance and behavior."

What is an excellent school? Excellence implies a striving for the highest standards in every phase of life (Gardner, 1961, p.160) and also implies that some better than others are. Beare, Caldwell and Millikan (1989, p.202) stated that in order to demonstrate excellence, rank orders should be drawn up. Thus excellence is defined on a scale that someone selects. The ways of measuring excellence involve comparisons between individuals or comparison between oneself at one's best and oneself at one's worst (Gardner, 1961, p.128). In the course of daily life or school life, we recognize many varieties of excellence in one another. However, when we try to define excellence, we tend to be most narrow at the point where we are selecting individuals, or testing them, or training them. The reasons for doing so are practical ones. Narrowing the grounds for selection is one way of making the selection process possible and manageable. Thus when people refer to excellent schools, they are referring to those schools that are excellent in certain aspects as compared to others. Schools that achieve excellence will be few at best. They are excellent because they are the most outstanding ones among others or they have certain aspects that outweigh others to a great extent. In a rank order, they are top ones. Excellent schools, in this study, are defined as "few of the 'good' schools which have many aspects that outweigh their counterparts to a great extent or schools which are outstanding amongst the 'good' schools."

In summary, whether or not a school is good or excellent depends on who judges it, in what context, with what criteria and for what purpose. It is difficult to judge a school to be 'good' and 'excellent', especially when schools have compound goals, complex internal processes and multiple clients. A good way to distinguish between a good school and excellent school is by the criteria of how people judge them and by their number.

To be good, schools have been recognized mainly by their conformity to explicit standards of student control and behavior and by outcomes in terms of public examination results or numbers and quality of graduates. People usually judge them roughly with subjective preferences. People judge them with different criteria, so that 'good' schools are not equally good; neither do they judge themselves by the same standard. The number of good schools in a community may be many.

To be excellent, schools have to exhibit a high quality in their general or specific performance and should be outstanding among their counterparts. People usually judge excellent schools by comparing and ranking them in order and then selecting those at the top

as the excellent ones. The criteria in judging excellence are more narrow and rigorous than those in judging goodness and effectiveness. By its very meaning, excellence is restricted to only few schools at best. We cannot expect every school to be excellent. In the ranking, the number of winners are far less than the number of losers. Excellent schools are certainly both good and effective as compared to their counterparts.

*Research into Excellent Schools*

In the literature there are some studies of good schools. Most of these studies provide descriptions of the quality of being good in 'good' schools (Austin, 1979; Mitchell & Willower, 1992; Wynne, 1980, 1981). Mitchell and Willower (1992) provided a useful description of the organizational culture inside a 'good' high school. In their study, the high school was regarded as 'good' because the selection was based on its reputation for excellence in the community and on its student achievement scores. The school's scores were higher than those of most other schools were and higher than expected.

However, there are only few studies concerning excellent schools in the literature. There are articles that deal with educational reforms and policies which drive schools towards excellence (Honig, 1985; Pipho, 1985, Wayson *et al.*, 1988). There are articles that describe how effective school programs render schools more effective and excellent. The Milwaukee's Project RISE (Rising to Individual Scholastic Excellence) (McCormack-Larkin *et al.*, 1982) is a case in point. There are articles that argue what types of leadership in schools are appropriate to lead schools towards educational excellence (Iannaccone & Jamgochian, 1985; Lane, 1992; Sergiovanni 1984). However, very few empirical studies concerning excellent schools are available in the literature. It may be due to the fact that excellence is difficult to define and excellent schools are difficult to identify in ways that are acceptable to most people. It was in such a context that the researcher decided to launch a research project into the organizational cultures of excellent schools in Hong Kong.

A long tradition of organizational research has suggested that schools are loosely coupled organizations that provide limited means for principals to influence teachers' work (Ainly, Reed & Miller, 1986; Weick, 1982). However, Firestone and Wilson (1985) suggest that in some cases principals can have strong linkages in the management of schools. They argue that effective schools are strong in both bureaucratic and cultural linkages. Both bureaucratic linkage and cultural linkage are important forces that bind people together and lead schools toward excellence. Based on the interpretation of and observations about the school effectiveness literature, Sergiovanni (1984, p. 13) argues that excellent schools are both loosely coupled and tightly coupled. Simultaneous loose-tight couplings, with tight coupling on rigidly controlled core values and loose coupling centered on autonomy and innovations, are also found in excellent corporations (Peters & Waterman, 1982). Based on the above observations and beliefs about effective and excellent schools, the researcher carried out this study to seek evidence to answer the following three research questions:

(1) What were the organizational cultures that commonly found in excellent schools?
(2) Were excellent schools strong in both bureaucratic linkage and cultural linkage?
(3) Were excellent schools both tightly coupled and loosely coupled?

## Methodology

A questionnaire method was employed in this study. An instrument, *School Values Inventory* (SVI), was created and developed for this study. The SVI was designed to assess

the educational and administrative values that are espoused by teachers, administrators and principals, and the degrees of sharing of these values among them. Values in this study are simply defined as "taken-for-granted beliefs about the proper functioning of a school." They may mean "the ways we do things here," "what ought to be," and "the ways a school should be operated." While organizational values exist in the various elements of school life, this study focuses only on aspects of educational administration. Teachers were asked to rate the value statements twice according to the following instructions:

**Please indicate, in the space on the right hand side of each item,**
**(I) the degree of similarity between the values described in each statement and your values;**
**(II) the degree of similarity between the values described in each statement and those values espoused by the school in the daily management practices.**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Very Dissimilar | Moderately Dissimilar | Slightly Dissimilar | Neither Similar Nor Dissimilar | Slightly Similar | Moderately Similar | Very Similar |

*The Pilot Study*

The SVI has undergone considerable development to establish both reliability and construct validity in two different phases: the pilot study and the main research. The initial version of the SVI comprised of 104 value statements covering all aspects of daily managerial practices in schools. In considering the prohibitive length of the questionnaire, the original version of the questionnaire was split into two separate instruments (the SVI Forms I and II) containing fewer items (Pang, 1995a). The screening of the value statements was done through by inviting 108 teachers from 14 Hong Kong secondary schools responding to the 54-item SVI Form I and a separate sample of 142 teachers from the same schools to the 50-item SVI Form II.

Principal component analysis (PCA) was used to screen the value statements as item selection, by which the number of value statements was successfully reduced to 69 statements which were included in ten exploratory factors (subscales) of organizational values. The validity and reliability of the ten subscales of organizational values were established through conducting reliability tests and multiple regression. The ten subscales of organizational values were as follows: Formality and Control (0.84), Rationality (0.77), Achievement Orientation (0.88), Participation and Collaboration (0.89), Collegiality (0.72), Communication (0.90), Staff Consensus (0.84), Recognition (0.81), Professional Orientation (0.81) and Teacher Autonomy (0.77), with the reliability coefficients (Alphas) provided in brackets.

*The Main Research*

The final form of the SVI (Form III) used in the main research was derived from the pilot study by combining the value statements from both the SVI Forms I and II in addition to five newly added value statements. A new sample of 554 teachers from 44 secondary schools in Hong Kong was invited to respond to the 74-item SVI Form III. Again, the PCA was used to analyse the raw data as a means of data reduction and to explore the underlying factors in the organizational value statements. With the running of PCA as a means of data reduction, similarly, ten distinct subscales of organizational values were explored. However, the structure of the latent factors in the main research was different from that in the pilot study.

The ten subscales of organizational values were as follows: Formality (0.76), Bureaucratic Control (0.73), Rationality (0.75), Achievement Orientation (0.80), Participation and Collaboration (0.89), Collegiality (0.85), Goal Orientation (0.84), Communication and Consensus (0.92), Professional Orientation (0.80) and Teacher Autonomy (0.82), with the scale reliability coefficients (Alphas) enclosed within brackets. The figures show that the scale reliability coefficients of the ten congeneric models were all satisfactory, ranged from 0.72 to 0.92, suggesting that all ten sets of value statements were reliable measures of the underlying latent variables. In the analysis, a data set of 61-items was reduced to a much smaller and manageable set of ten composite subscales. Thus this study succeeded in developing the School Values Inventory as a valid, reliable and manageable instrument to measure the organizational values in schools.

*The Cultural Contents*

The SVI was designed to learn about the thinking, activities, and feelings of teaching staff and administrators regarding the value statements. There were ten subscales of organizational values and they formed the cultural contents (shared organizational values) in schools. However, depicting school cultures in terms of the ten subscales of organizational values for comparison might be a bit complicated and clumsy, an attempt was made to further reduce the ten subscales into fewer secondary factors (scales). Using LISREL confirmatory factor analytic modeling techniques (Jöreskog & Sörbom, 1989), an attempt was made to confirm a four-factor model of organizational values in schools in terms of the ten subscales of organizational values, hoping that the model might summarize the major characteristics of the cultural contents in schools. The four major scales of organizational values within schools are defined as follows:

(1) Bureaucratic linkage: the hierarchical and organizational structures built to facilitate and enhance the achievement of school goals.
(2) Cultural linkage: the strategies in managing a school that facilitate the development of a school culture.
(3) Tight coupling: the ways in which school administrators bind people to the goals, visions and philosophy; create coherence of efforts; and reinforce appropriate behavior of their members towards accomplishment and success.
(4) Loose coupling: the aspects of flexibility and tolerance in a school allowed for teachers to execute daily duties at their own discretion.

A list of the SVI subscales with sample items for each of the four scales of organizational values is included in Table 1.

*The Organizational Culture Index*

It is argued that "shared values" is a measurable, testable and verifiable construct of organizational culture and that organizational culture can be quantified and classified into "strong," "weak" and "conflicting" ones in terms of different degrees of sharing of beliefs and values within an organization. The SVI was specially designed to fulfill such purpose. In the questionnaire, teachers were asked to rate all the value statements twice on a 7-point Likert scale, first on their own values and then on the values espoused by schools. By taking differences of these two ratings, a value divergence (VD) score was generated for each item for each respondent. For the sake of ease of understanding and interpretation, a value similarity (VS) score was further created and generated from the VD score by subtracting it from the maximum point (7) in the Likert scale. That is, the VD and VS were complements but in opposite senses. An Organizational Culture Index (OCI) was created for each school.

Table 1
Hypothetical Scales, Subscales and Sample Items of
the School Values Inventory Form III

***Hypothesized Subscales of Bureaucratic Linkage***

**Subscale B1: Formality (6)***
1. Teachers are subordinate to the administrative system in the school.
2. Teachers must always get their orders from higher up.

**Subscale B2: Bureaucratic Control (5)**
1. Quality education is a management problem that can be solved by tight control.
2. Regular checks on teachers for rule violations can prevent wrong doing.

**Subscale B3: Rationality (5)**
1. It is important that duties and responsibility of all school personnel are clearly defined.
2. School administrators should make decisions based on facts, not feelings.

***Hypothesized Subscales of Cultural Linkage***

**Subscale C1: Achievement Orientation (5)**
1. The school should have high expectations for student achievement and behavior.
2. The school should reinforce high expectations by establishing academic standards and incentives.

**Subscale C2: Participation and Collaboration (8)**
1. Teachers should have participation in decision making.
2. Both teachers and principal are partners, rather than super-ordinates and sub-ordinates, who work together.

**Subscale C3: Collegiality (5)**
1. Teachers and administrators should provide constructive feedback to each other regularly.
2. Teachers should meet together to share their knowledge and experiences.

***Hypothesized Subscales of Tight Coupling***

**Subscale T1: Goal Orientation (7)**
1. At the beginning of school year, the school's general goals should be explained to the new teachers.
2. A work plan that gives an overview of the school goals should be written down.

**Subscale T2: Communication and Staff Consensus (9)**
1. Teachers should be kept well informed on matters of importance to them.
2. The principal should always explain clearly why a decision has been made.

***Hypothesized Subscales of Loose Coupling***

**Subscale L1: Professional Orientation (5)**
1. Teachers are a very highly trained and dedicated group of professionals.
2. Administrators should encourage teachers to set goals for their own growth.

**Subscale L2: Teacher Autonomy (6)**
1. The organizational structure should give considerable autonomy to the departments within schools.
2. Teachers should have freedom to engage in a variety of practices that they think important.

*Note.* (1) * indicates the number of items in the subscales.
(2) The subscale codes refer to the original meanings of the subscales in the hypothesized model of organizational values. B1-B3 refer to the subscales of Bureaucratic Linkage, C1-C3 to the subscales of Cultural Linkage, T1-T2 to the subscales of Tight Coupling and L1-L2 to the subscales of Loose Coupling.

An OCI score was the average value for a school after summing up all teachers' VS scores in that school. Thus the OCI measured the extent to which organizational values were shared between teachers and the school and it was an overall assessment of the degree of sharing of organizational values. In this study organizational culture was defined as the pattern of sharing of organizational values between teachers and schools in the daily managerial practices. Thus the OCI was an indicator of the strength of organizational cultures in schools. When the cultural contents in schools (types of organizational values commonly shared in schools) as well as the strength of the cultures (the degrees of sharing of the identified values) are determined, the typology of school cultures is completed.

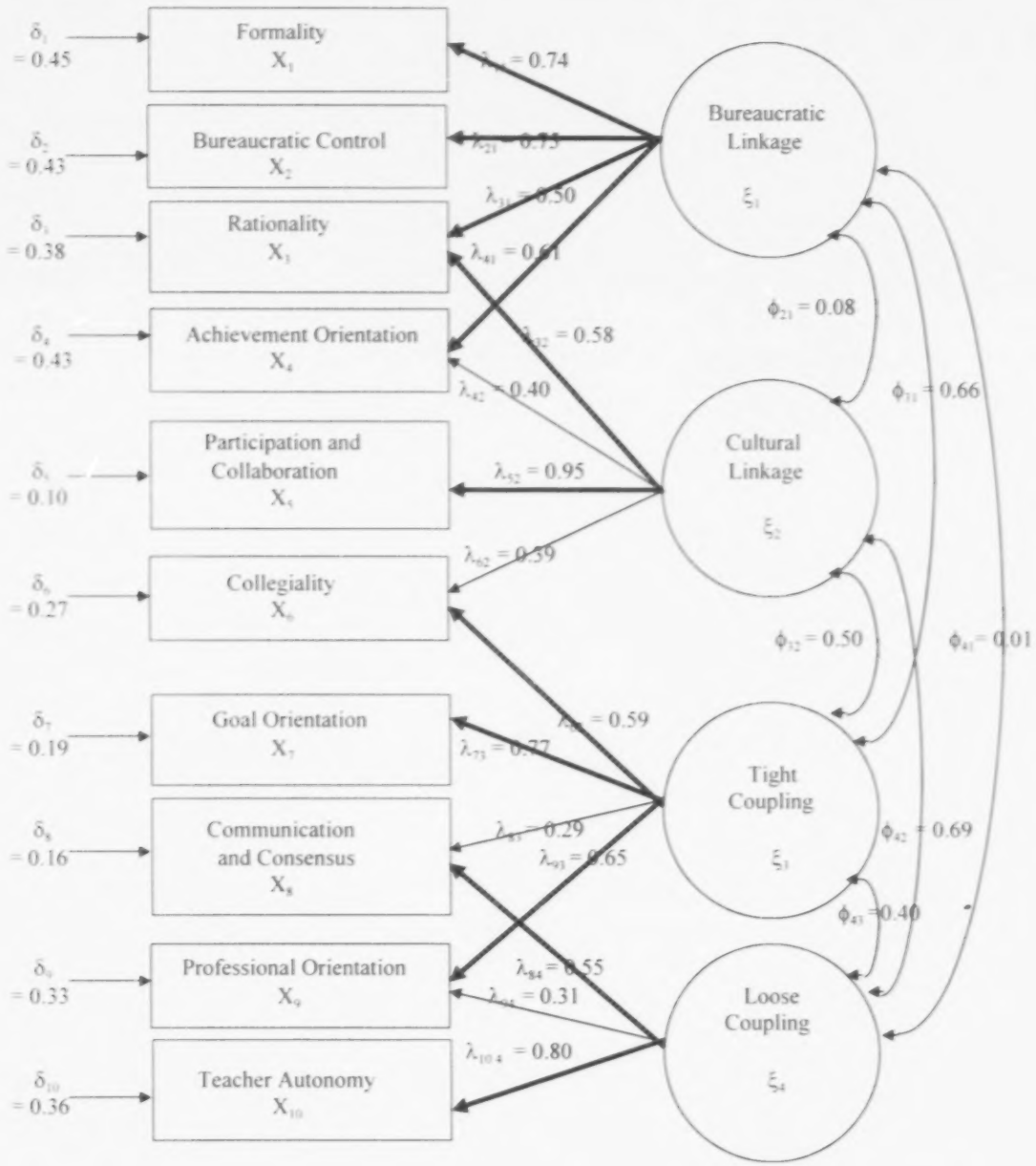
## Results and Discussions

### *A LISREL Four-Factor Model of Organizational Values*

Most theories and models in social, psychological and educational research are formulated in terms of theoretical or hypothetical construct (or latent variables) that are not directly measurable or observable. The measurement of a hypothetical construct is therefore accomplished indirectly through one or more observable indicators, such as responses to questionnaire items, which are assumed to represent the construct adequately. In this study, it is hypothesized that the major scales of organizational values include bureaucratic linkage, cultural linkage, tight coupling and loose coupling. Since these four major scales of organizational values in schools are difficult to observe and measure directly, ten subscales of organizational values were developed as the observable and measurable indicators. The LISREL 8 computer program (Jöreskog & Sörbom, 1993) was used to analyse the data, since it enables the researcher to incorporate measurement error in both the observed and latent variables in his model and to search for appropriate models.

A hypothesized structure of a four-factor model of organizational values as stipulated in Table 1 was that Formality, Bureaucratic Control and Rationality were indicators of Bureaucratic Linkage; Achievement Orientation, Participation and Collaboration, and Collegiality were indicators of Cultural Linkage; Goal Orientation, Communication and Consensus were indicators of Tight Coupling; and Professional Orientation and Teacher Autonomy were indicators of Loose Coupling. When fitting the hypothetical model to the data, poor goodness-of-fit indices were obtained; that is, the hypothetical model was not confirmed. Subsequently, attempts were made to modify the hypothetical model and to develop a model showing a very good fit to the data with substantive meanings. After a series of modifications of the hypothetical model, a final, substantive model of good fit to the data was developed and is shown in Figure 1 (Pang, 1995b). The goodness-of-fit indices of the developed model under consideration are summarized in Table 2. The GFI indicates the relative degree of variance and covariance jointly explained by the model. Although the exact distribution of this index is unknown, it is generally agreed that values close to or above 0.9 indicate a good fit of the model to the data. The GFI in the present model was 0.985, indicating a very good fit of the model to the data. AGFI is similar to the GFI, except that it adjusts for the number of degrees of freedom in the model. This index was 0.962; again indicating that the developed model was very good fit to the data. On the other hand, RMSR is the average of the variance and covariance left unexplained by the model. Given a good fit of the model to the data, this value should be close to zero. The RMSR (0.0186) and the standardized RMSR (0.0226) of the developed model also indicate that the remained unexplained variance and covariance of the model were very small. Other fit indices, for

example, NFI, NNFI, CFI, IFI and RFI have index values equal to 1.000 or above 0.990, indicating the result was close model-data congruence.




**Key:** Factor loadings greater than 0.400 were printed in bold arrows. Xs--observed X-variables; δs--error terms of X-variables; ξs--latent constructs; $\lambda_{ij}$--factor loadings of X-variables on the respective latent constructs; $\phi_{ij}$--correlation coefficient between the latent constructs.

**Figure 1. A Final Four-Factor Model of Organizational Values of Secondary Schools in Hong Kong**

**Table 2**
**Goodness-of-Fit Statistics of the Final Four-Factor Model of Organizational Values**

| | |
|---|---|
| Chi-Square with 22 Degrees of Freedom | = 21.650 (P = 0.481) |
| Goodness of Fit Index (GFI) | = 0.985 |
| Adjusted Goodness of Fit Index (AGFI) | = 0.962 |
| Parsimony Goodness of Fit Index (PGFI) | = 0.394 |
| Root Mean Square Residual (RMSR) | = 0.0186 |
| Standardized RMSR | = 0.0226 |
| Total Coefficient of Determination For X-variables | = 0.999 |
| Normed Fit Index (NFI) | = 0.997 |
| Non-Normed Fit Index (NNFI) | = 1.000 |
| Parsimony Normed Fit Index (PNFI) | = 0.488 |
| Comparative Fit Index (CFI) | = 1.000 |
| Incremental Fit Index (IFI) | = 1.000 |
| Relative Fit Index (RFI) | = 0.994 |

Bureaucratic linkage refers to the hierarchical and organizational structures in a school built to facilitate and enhance the achievement of schools goals. The indicators for Bureaucratic Linkage were Bureaucratic Control (0.75), Formality (0.74), Achievement Orientation (0.61) and Rationality (0.50), with their factor loadings given in brackets and arranged in decreasing order. The first three indicators matched what had been hypothesized in the proposed model, except Achievement Orientation. The final model reveals that when there was a strong emphasis on bureaucratic linkage in a school, the school would have a well-established system of superordinate-subordinate relationships and a strong emphasis on the disciplined compliance to directives from superiors. The school was well characterized by specialization of tasks, routinization of activities and impersonal organizational climate. In the school, there was also a strong orientation to academic achievement and success. The hierarchical and organizational structures were built to serve this purpose, especially in the context of Hong Kong secondary schools. All four indicators with their appropriate factor loadings combined to contributing and justifying the meaning of Bureaucratic Linkage.

Cultural linkage refers to the strategies in managing a school that facilitate the development of a school culture. The model indicates that Participation and Collaboration (0.95), Achievement Orientation (0.40) and Collegiality (0.39) were the crucial strategies for creating strong organizational cultures in schools. These indicators matched what had been hypothesized in the proposed model, except Rationality (0.58). Schools which had strong cultural linkages had a high spirit of cooperation among organizational members. Participation and collaboration among the members allowed the sharing of leadership and decision making in the workplace and gave people meanings in their work. Teachers were given balanced responsibility and authority in determining the exact means by they addressed the problem of increasing academic performance. Team spirit in the schools was high and teachers worked together and united in efforts for the accomplishment of school goals. Rationality contributed to people's interpretation about their work in the organization, in which decision making was based on facts but not feelings and promotion was based on merits but not relations. If such rationality was not maintained in the school, it directly posed a threat to the development of culture.

Tight coupling refers to the ways in which school administrators bind teachers to the goals, visions and philosophy. The indicators for Tight Coupling were Goal Orientation (0.77), Collegiality (0.59), Professional Orientation (0.65) and Communication and Consensus (0.29). Goal attainment, communication and consensus were the important ways to drive people to the organization's core values and to create coherence of efforts. In addition to what had been originally hypothesized, collegiality and professional orientation were also regarded as the strategies of Tight Coupling since they were both goal oriented and mission driven.

Loose coupling refers to the aspects of flexibility and tolerance in a school that allow for teachers to execute daily duties at their own discretion. The indicators for Loose Coupling were Teacher Autonomy (0.80), Communication and Consensus (0.55) and Professional Orientation (0.31). Autonomy and professionalism were the main aspects of loose coupling in which teachers had minimal tie but maximal discretion within an organization. Teachers in that school would enjoy a lot of autonomy and discretion to enhance their creativity in the ways to achieve goals. The final model indicates that communication and consensus were the basic and effective strategies of Loose Coupling as well, since teachers could not be granted with autonomy if they were ill informed or they did not agreed with the school goals.

## In Search of Excellent Schools

Before the general characteristics of excellent schools in Hong Kong could be investigated, it was necessary to establish specific criteria to identify which schools were "excellent." Thus an attempt was made to search, assess and identify "excellent schools" in the sample using specific criteria to be established.

In public choice of schools, there are four main "stakeholder" groups that can judge a school to be bad, good or excellent. The first group is the parents of those students who have recently been admitted to the school. They have made their choice on the basis of their judgment of the school. The second group is the teachers who have worked in the school for a certain period of time and have a good knowledge of the school's teaching and administrative activities and its organizational values and culture. The third group is the students who are studying in the school. They are both the clients and products of the school. The fourth group is the community of the local area (including school inspectors) who know the school through their perceptions of facilities, activities and the public demeanor of both students and staff.

Before investigating the characteristics of excellent schools, there should be identification of schools that could be claimed as excellent. Instead of using criteria of selecting certain aspects of educational excellence in schools and then comparing them as is usually done in many effective schools studies, this study employed criteria relying on the judgment by the stakeholders of schools. Rather than using performance indicators (such as aggregated academic achievement scores, admission rates to universities, retention rates, employability of students after graduation, students' behavior and so forth), this study sought to examine parents' judgment in making a choice of schools and teachers' opinions regarding the teaching and administrative practices in the schools. These judgments and opinions would form the criteria used to identify and select "excellent" schools from a larger pool. In the process of selecting excellent schools, the researcher, by a variety of means, narrowed the range of excellence and was subjective in adopting criteria. The reasons for doing so were practical. Narrowing the grounds for selection and being subjective in adopting the criteria were the ways of making the selection process possible and manageable. Thus, with limited

resources and funding, neither the opinions of the community nor the preferences of the students regarding the "goodness" of schools were included in this study.

*"Average Banding Values" as the First Criterion*

In the search of excellent schools, parental choice of schools could form a good indicator of the quality of schools. Parents usually make choice of schools according to schools' academic achievement, reputation in the community at large, and the background of schools, such as, history, religious nature and the type of sponsoring bodies. Among them, academic achievement and reputation are the two most important factors. In order to compete for more able pupils, schools attempt to make themselves well known to parents on these two aspects.

In the Secondary School Places Allocation (SSPA) System (Education Department, 1992) still functioning in Hong Kong, after the completion of primary schooling, pupils in the whole population are divided into five bands. "Band 1" refers to those pupils at the top 20% in a converted order of merit, Band 2 at the next 20%, and so on. Allocation of secondary school places is by net, by band, by parents' choice of schools and by a computer-generated random number that was introduced in the system to uphold the balance between ability grouping and equity. Among all these conditions, the pupils' converted order of merit (banding value) is the crucial factor that determines whether parents' choice is successful. Thus under the SSPA system, each secondary school in Hong Kong has an average banding value of intakes indicating the quality of pupils, with a smaller number indicating better quality of pupils.

An average banding value also indicates the popularity of the school among parents in the public choice system. If a school is properly run and well managed, and itself is well known in the community, the quality of Form 1 pupil intake will rise year by year since more and more parents will prefer it. In contrast, if a school is poorly managed and has a bad reputation among parents, the school will be allocated pupils of lower abilities. Hence pressure is created on schools to be operated and managed in a way which reflects the competition for the Form 1 pupil intake. In that sense, both parents and pupils regard schools with low average banding values (better intakes) as good or excellent schools. They are those schools aspired to by both parents and pupils.

Since pupils are also allocated to secondary schools according the other two criteria, by nets and by computer-generated random numbers, the averaging banding values of schools are only a rough guide to search for "good" or "excellent" schools. In the search of excellent schools, more stringent criteria should be introduced and incorporated in the selection and comparison of schools. Such criteria are discussed in the next section.

*The Organizational Culture Index (OCI) as the Second Criterion*

It has been argued that averaging banding values are only a rough guide to search for "good" or "excellent" schools. Additional and stricter criteria should be applied in order to make the selection of "excellent" schools more effective and efficient. A new indicator, *Organizational Culture Index* (OCI), which was generated from the questionnaire, was introduced. The OCI measures the overall degree of sharing of values between teachers and schools in their daily teaching and administrative practices. The higher the OCI score is of a school, the greater the extent to which organizational values of the school are shared between

teachers, the principal and administrators. Conversely, the lower the OCI score, the degree of sharing of these values are lower or more divergent.

Organizational culture is defined in this study as "the pattern of sharing of organizational values between teachers and schools." It is further postulated that the strength of organizational cultures can be measured in terms of the degrees of sharing of organizational values between the two parties. Thus the OCI is an indicator of the strength of school culture. A school with a very high OCI score could be said to have a "strong culture" in which organizational values are extensively shared among all the staff in it. A school with a very low OCI score has a "conflicting culture" in which organizational values diverge between teachers and administrators and are in conflict. A school with a moderate OCI score has a "weak culture." It is argued that teachers in a school of strong culture will agree and accept the ways the school is being administered and managed, no matter how it emphasizes on organizational values. In the teachers' minds, the school is properly managed and on the right track to excellence. In a school of conflicting culture, there are many disagreements and conflicts between teachers and school administrators. Teachers in such a school have negative feelings towards school life. Teachers are frustrated and discontented with the ways the school is being operated.

*"Average Banding Values" and "OCI" as Indicators of Excellent Schools*

It is assumed in this study that a combination of the criteria of the banding of schools and the OCI would be indicative of good and excellent schools in Hong Kong. The banding of schools is an indicator of the popularity of a school for parents and pupils in the public choice system in Hong Kong. The OCI is an indicator of the acceptability of a school by the teachers. A combination of these two criteria gives a model of the states of development of schools with four quadrants. The proposed model of developmental states of schools is given in Figure 2. It is argued in the model that schools which have high quality of pupils and are properly managed will be "good" schools, whereas "excellent" schools are a sub-group of good schools, which have better quality of pupils and higher OCI scores than the "good" schools. On the other hand, schools that have high quality of pupils but are poorly managed will be "conflicting" schools; schools that have low quality of pupils but are properly managed are "developing" schools; and schools that have low quality of pupils and are poorly managed are definitely "poor" ones. These four quadrants depict the different states of development of schools. As indicated by the curved arrows in the model, a school may be in a deteriorating state, that is, becoming poor, or in a state of struggling and improving, depending on the direction it is taking and whether the school is properly managed. Nevertheless, the ultimate goal for all schools is to strive for a state of goodness or excellence.

*Identifying Excellent Schools*

The criteria used to identify excellent schools were two: schools' average banding values in the Form 1 pupil intake and schools' OCI scores. An excellent school should have a very strong culture, that is, extensive sharing of a wide range of organizational values. If we simply ask teachers a question that "Is your school an excellent school?" Naturally, different teachers in different schools would give different answers. It is argued and assumed in this study that teachers who come from a school of a low average banding value (good quality of pupils) and share extensively the organizational values of that school (a high OCI score of that school) will very likely give the answer "Yes!" On the contrary, teachers who come

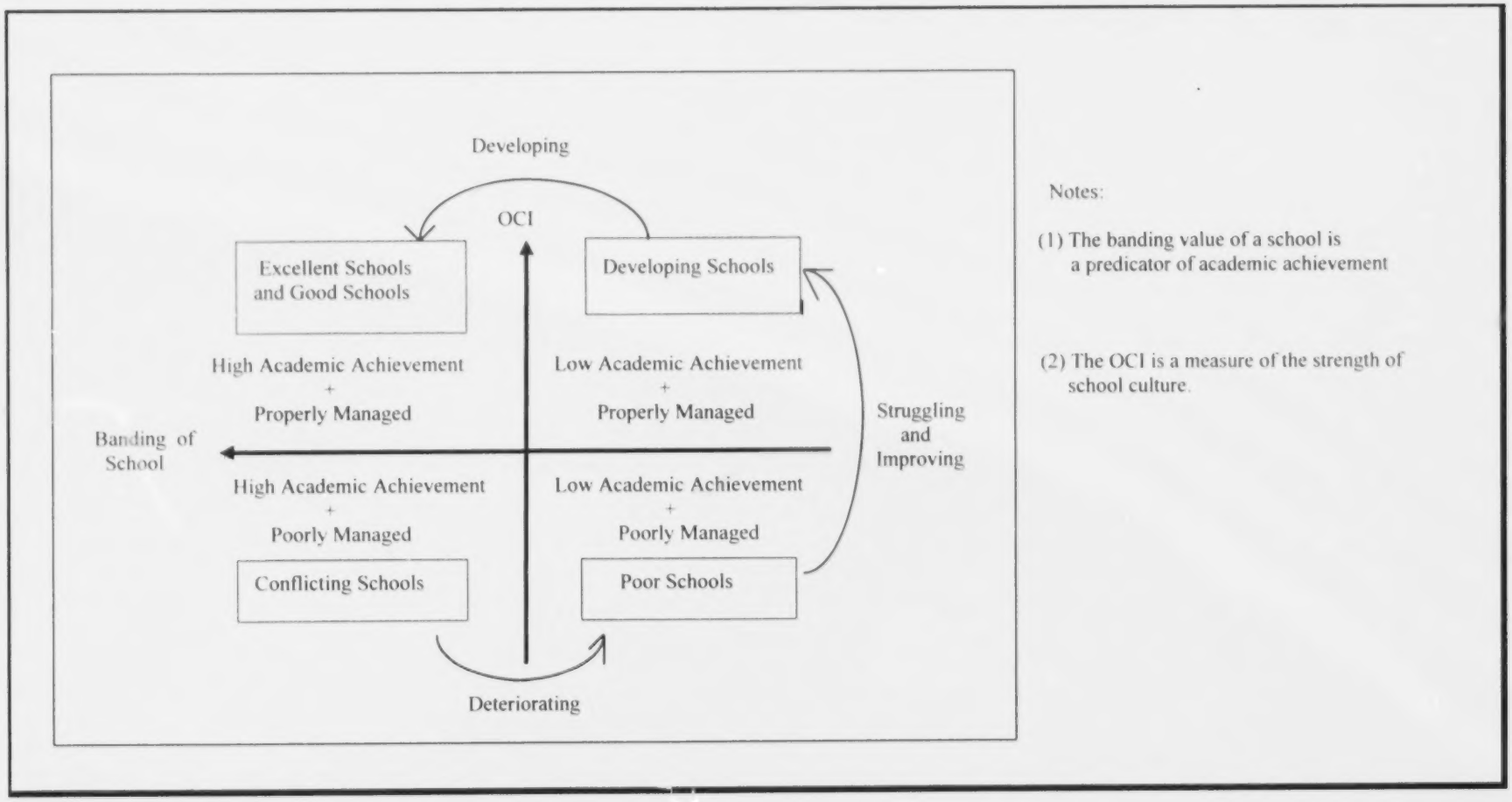

Developing
OCI
Excellent Schools and Good Schools
Developing Schools
High Academic Achievement + Properly Managed
Low Academic Achievement + Properly Managed
Banding of School
Struggling and Improving
High Academic Achievement + Poorly Managed
Low Academic Achievement + Poorly Managed
Conflicting Schools
Poor Schools
Deteriorating
Notes:
(1) The banding value of a school is a predicator of academic achievement
(2) The OCI is a measure of the strength of school culture.

Figure 2. A Hypothetical Model of Developmental States of Schools

from a school of a low average banding value (good quality of pupils) but do not share the school's organizational values (a low OCI score of that school) will probably give the answer "No!" Thus a combination of the two criteria will provide an effective and efficient way to identify excellent schools.

In the questionnaire, respondents were asked to rate the average banding values of the Form 1 pupil intake of their schools according to the following subdivisions:

1 = Band 1.0-1.4; 2 = Band 1.5-1.9; 3 = Band 2.0-2.4; 4 = Band 2.5-2.9;
5 = Band 3.0-3.4; 6 = Band 3.5-4.0; 7 = Band 4.1-4.5; 8 = Band 4.6-5.0.

Thus the five bands of schools were further subdivided into eight new categories, with lower values indicating the better quality of pupils. Should a school be identified as "excellent," it should have an average banding values as low as possible. It has been argued in the previous section that banding values were only a rough guide in identifying excellent schools since none of the schools had admitted their pupils purely from one band. It is also argued that not all Band 1 schools were necessarily excellent schools and that even some Band 2 schools might have been excellent schools since the allocation of pupils was also affected by the computer-generated random numbers. Thus using the banding criterion, excellent schools in this study were restricted to the first two subdivisions in the new categories. By this criterion, 19 schools (out of 44) survived the test.

Another criterion generated from the questionnaire to identify excellent schools is the OCI. It is an index to rank schools in order of strength of organizational culture. A residual plot of the OCI scores for all 44 schools in the sample was provided in Figure 3, which provides an efficient way to identify which schools have high OCI scores In a null model, the residual is the value of the OCI score for a school after having adjusted for the grand mean of the OCI scores. The number of excellent schools should not be many but should be restricted to only few among a larger pool. Thus the OCI criterion used to identify excellent schools in this study was arbitrarily restricted to those schools having residuals greater than +3.0. By this criterion, as shown in Figure 3, only five schools survived the test.

Each criterion by itself is not sufficient to identify excellent schools. Excellent schools could be identified by a combination of the criteria of subdivisions of banding of schools and residuals of OCI scores. When the criteria were restricted to schools of Subdivision 1 with residuals of OCI scores greater than +3.0, only one school, school No. 18, was identified. Thus school No. 18 was the best school among the 44 schools in the sample when averaging both the criteria adopted. However, it might be unreliable and invalid to select only one excellent school and generalize its characteristics to other excellent schools in the population, because the identification might have capitalized on chance. If the criteria were extended to Subdivisions 1 and 2 with residuals of OCI scores greater than +2.50, five schools (school Nos. 18, 8, 14, 35 and 44) survived the selection. However, regarding five schools out of 44 (more than one-tenth of the sample) as excellent schools might be too many in number. When the criteria were cut to Subdivisions 1 and 2 with residuals of OCI scores greater than +3.0, three schools (school Nos. 18, 8 and 14) were left. In considering the fact that the proportion of excellent schools in the population should be small, the last option of cut off points in the criteria was chosen.

**Figure 3. Residuals of the Organizational Culture Index of 44 Secondary Schools in Hong Kong**
**(According to School Numbers)**

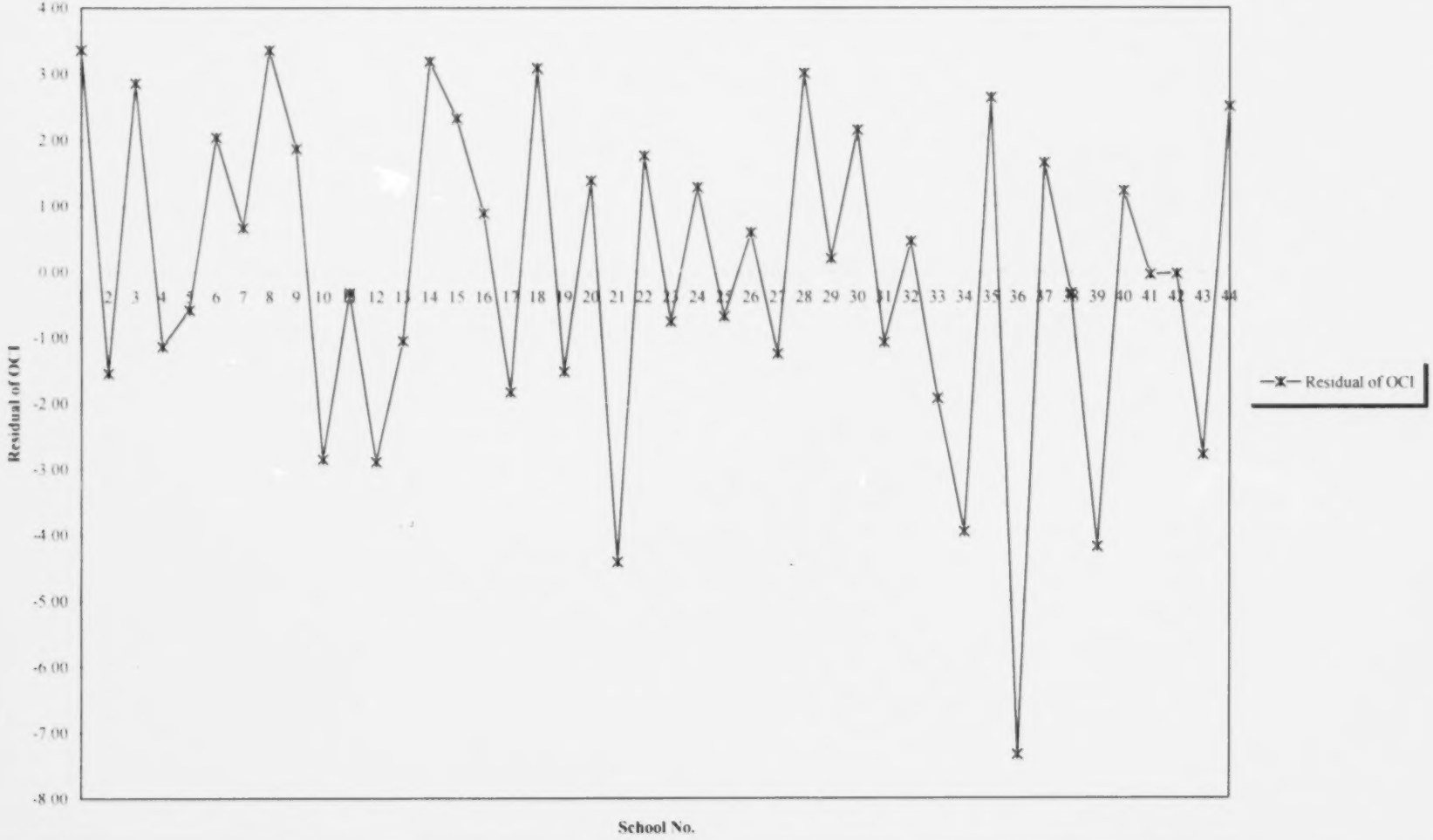


Figure 4 shows a plot of the residuals of OCI scores of 44 schools (y-axis) against the subdivisions of banding according to the proposed model of developmental states of schools shown in Figure 2. Excellent schools could be identified at the tip of the left-hand upper quadrant in the model, or by using both the criteria that excellent schools should be schools of Subdivision 1 or 2 with OCI residuals greater than +3.0. The identified excellent schools were schools Nos. 18, 8 and 14. They were excellent in the views of both parents whose children were studying in these schools and teachers who were working there.

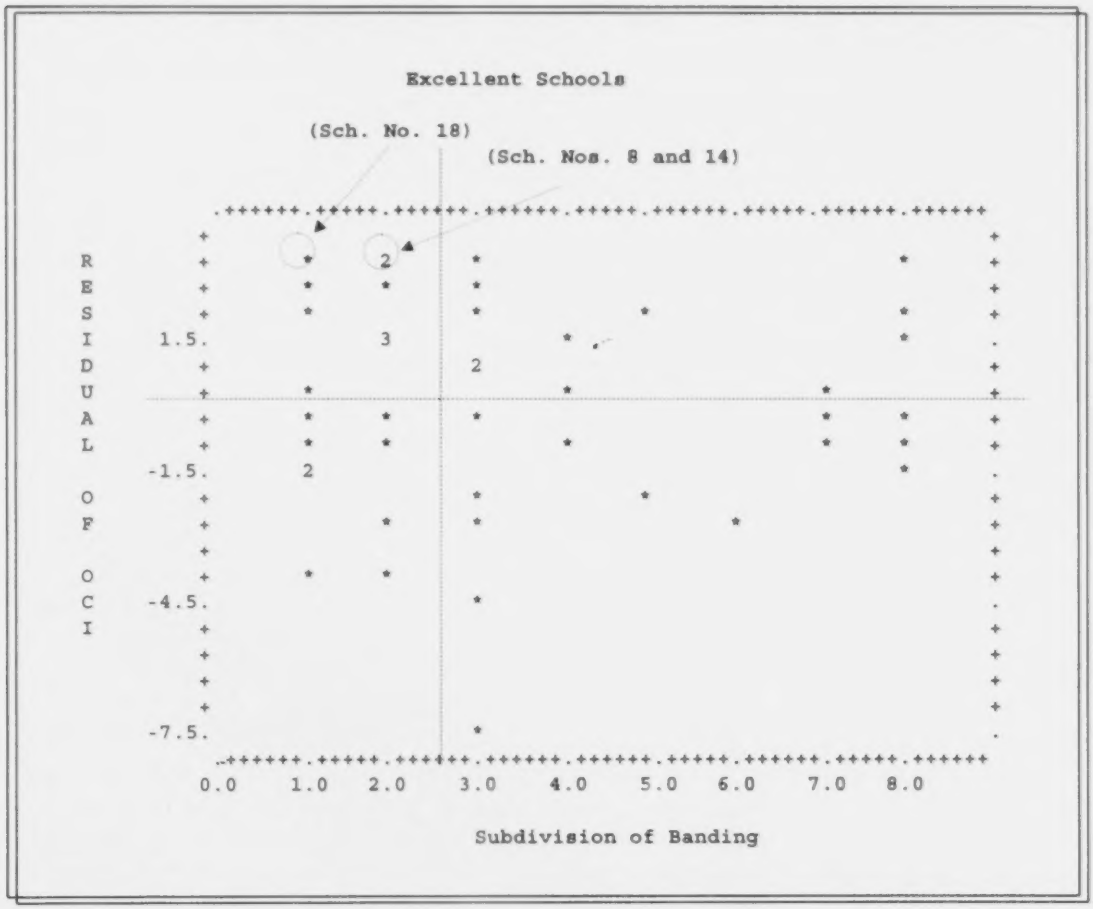



Figure 4. Distribution of Schools by Subdivision of Banding and by Residual of the OCI Score

*Notes:*

(1) There are 44 secondary schools in the sample.

(2) The greater value of a residual, the greater is the OCI score.

(3) The banding values of schools were subdivided into eight new categories. Respondents were asked to rate them according to the average banding value of their schools in the Form 1 pupil intake in last semester. The sub-divisions are shown as below:

1 = Band 1.0-1.4; 2 = Band 1.5-1.9; 3 = Band 2.0-2.4; 4 = Band 2.5-2.9;
5 = Band 3.0-3.4; 6 = Band 3.5-4.0; 7 = Band 4.1-4.5; 8 = Band 4.6-5.0.

## Organizational Cultures of Excellent Schools in Hong Kong

In the search for excellent schools, two subjective criteria were adopted in the processes of comparison and selection. The identified "excellent schools" should therefore be distinct from the other schools in two aspects: they were schools of low average banding values (good quality of pupils) and they had strong organizational culture. Besides these characteristics, more specifically, this research was designed and conducted to answer the three research questions mentioned before, that is, to examine what were the characteristics of excellent schools that might have led them to excellence.

### *Organizational Profiles of Schools*

Without being outstanding by some criteria, excellence by itself has no meaning. Similarly, with no comparison to a standard or norm, excellent schools may mean nothing. What makes schools excellent are the special conditions by which the schools surpass their counterparts. Thus in the analysis of excellent schools, comparison of the characteristics of excellent schools with their counterparts was the main strategy. Before doing that, we should have full information of all schools in the sample as a standard or norm. Again, we should compare the magnitude of scores for the 44 schools. By adjusting all the scores to their grand means, the residual plots allowed comparison of organizational profiles of schools. After being adjusted to the grand means, the residual of the composite scores of Bureaucratic Linkage, Cultural Linkage, Tight Coupling, Loose Coupling of the 44 schools are shown in Figure 5. Figures 3 and 5 show that each school has its own profiles of OCI and organizational values respectively and that no school is identical with another, that is, each school has its unique organizational culture and characteristics. In order to make the comparison between schools easier, the residuals of the five composite scores were further converted into ranks. Schools were sorted according to their residuals in descending order and then were assigned a rank respectively for each score. All ranks ranged from 44 to 1. The higher the rank, the larger was the value of a specific score.

### *Organizational Values of Excellent Schools*

With the criteria of average banding values of schools and the residuals of the OCI scores, three schools (Nos. 18, 8 and 14) out of 44 schools were identified as excellent schools in Hong Kong. They were excellent because parents preferred them to the other schools and teachers themselves had a high degree of acceptance of the organizational values. These schools had an exceptionally strong organizational culture in the sense that the perceived organizational values of the schools were extensively shared. What then were these organizational values? Were these characteristics rendering them outstanding when compared with the other schools? Table 3 shows the degrees of emphasis on the organizational values in Bureaucratic Linkage, Culture Linkage, Tight Coupling and Loose Coupling in these schools. The ranks for each dimension of organizational values of each school indicate the relative degrees of emphasis on the values as compared to other schools. The higher the rank, the greater was the degree of emphasis. The degrees of emphasis on the organizational values by these schools are also shown in Figure 6.

School No. 18 was the most "excellent" one among the 44 schools based on the criteria chosen. The findings show that school No. 18 was strong in both bureaucratic linkage (with rank of 43) and cultural linkage (42); and was both tightly coupled (42) and loosely coupled (41). Teachers in this school had a high degree of sharing of organizational values with the school (with an OCI rank of 41). They agreed with the schools that there should be strong emphases on bureaucratic linkage, cultural linkage, tight coupling and loose coupling in the daily administrative and managerial practices.

**Figure 5. Residuals of the Scores of Organizational Values of 44 Secondary Schools in Hong Kong**

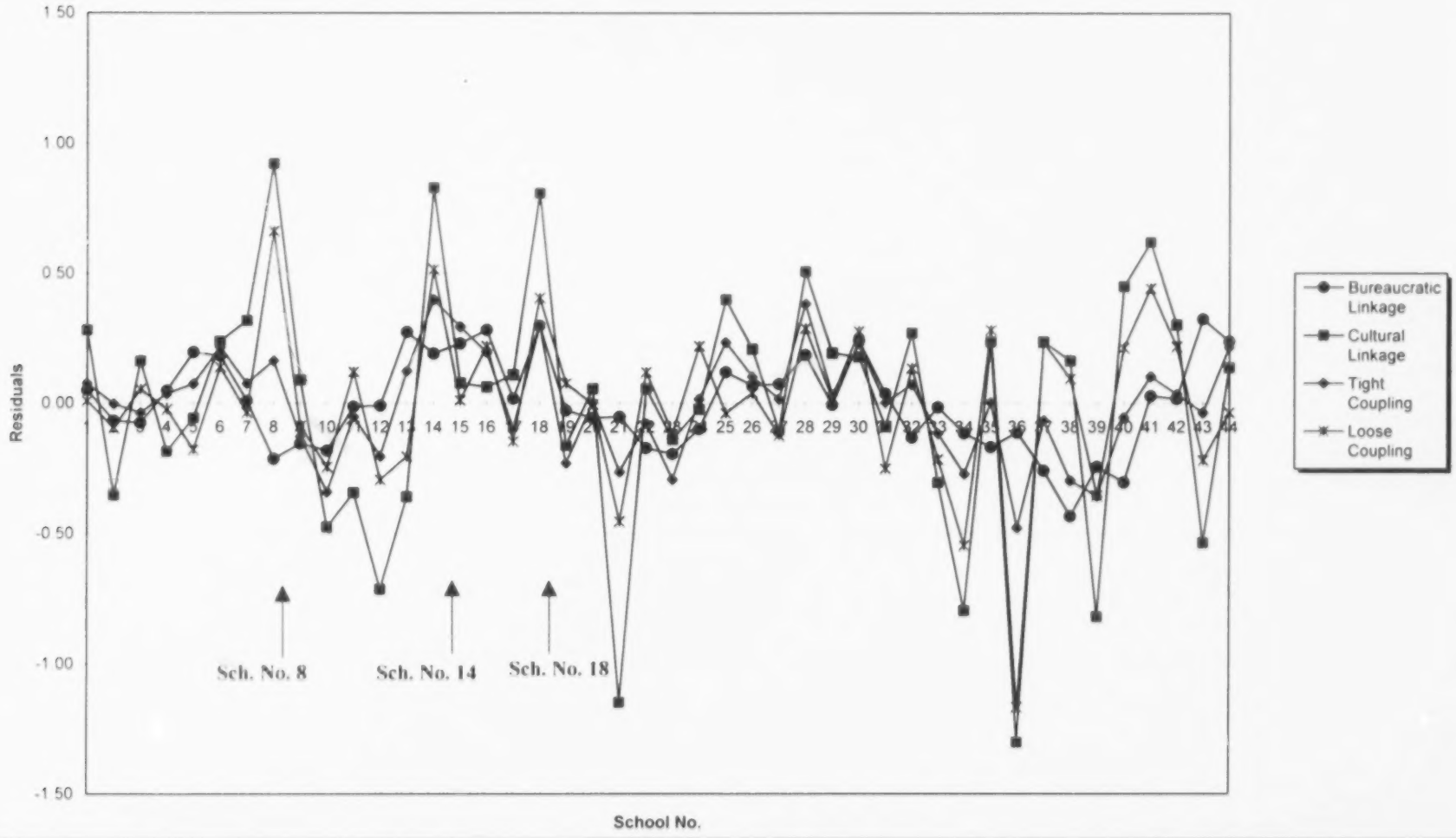
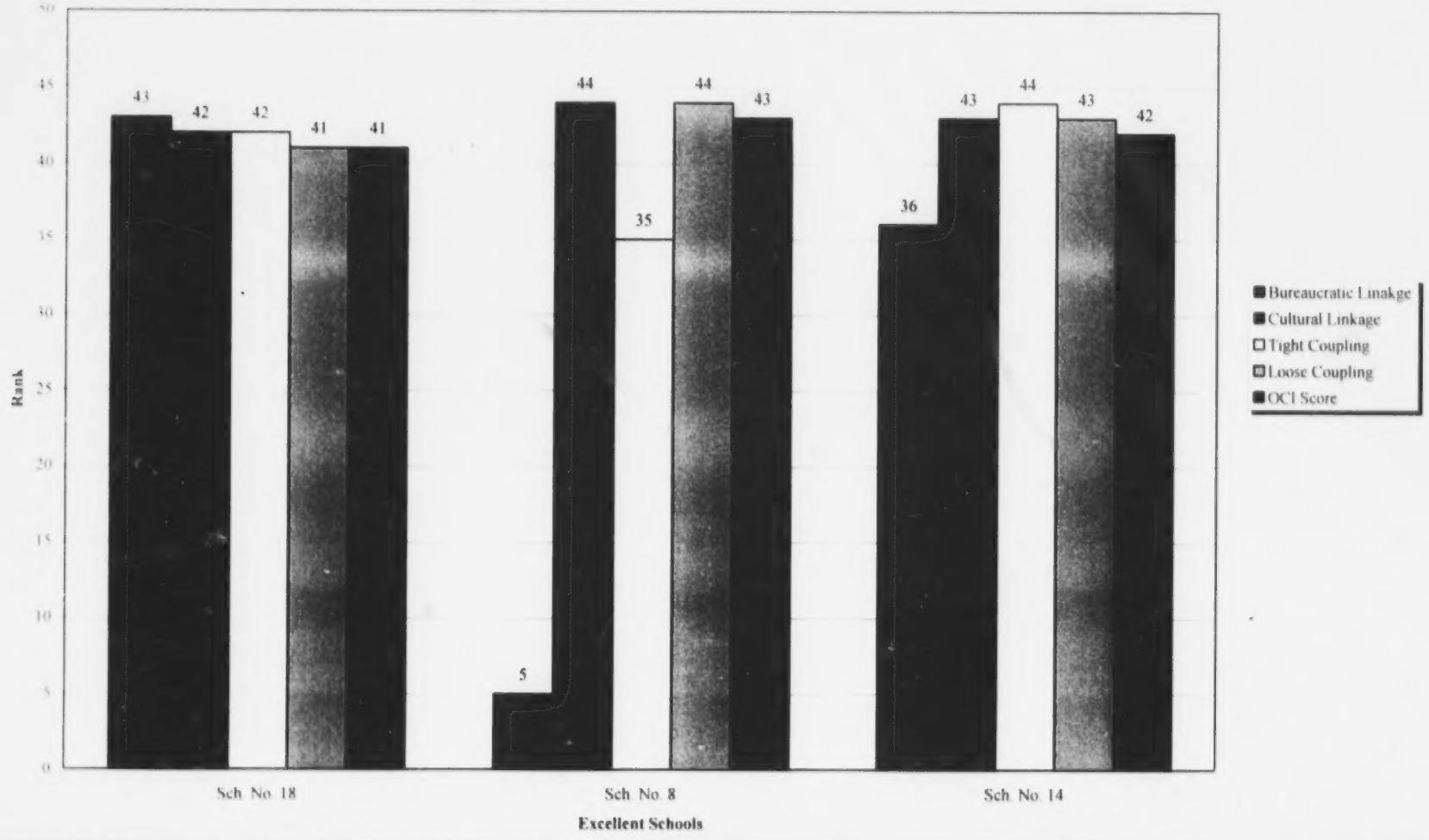


**Figure 6. Ranks of the Scores of Organizational Values and OCI of the Three Excellent Schools in Hong Kong**



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School No. 8 was found to have the strongest emphasis on cultural linkage (44) and loose coupling (44). However, its degree of emphasis on tight coupling was only moderately strong (35) and on bureaucratic linkage was exceptionally low (5). Such a pattern of emphasis on organizational values was also extensively shared between teachers and the school (with a OCI rank of 43).

School No. 14 was found to have the strongest emphasis on tight coupling (44) and very strong emphases on both cultural linkage (43) and loose coupling (43), but a moderately strong emphasis on bureaucratic linkage (36). Similar to the other two excellent schools, the organizational culture in this school was also strong and teachers understood and well accepted the arrangements at this school (with an OCI rank of 42).

**Table 3**
**Ranks of the Organizational Values, OCI Scores and Banding Subdivisions of the Three Excellent Schools in Hong Kong**

| | Rank | | | | | | |
|---|---|---|---|---|---|---|---|
| **School No.** | **Bureaucratic Linkage** | **Cultural Linkage** | **Tight Coupling** | **Loose Coupling** | **Total Rank** | **OCI Score Rank** | **Banding Subdivision** |
| **18** | 43 | 42 | 42 | 41 | 168 | 41 | 1 |
| **8** | 5 | 44 | 35 | 44 | 128 | 43 | 2 |
| **14** | 36 | 43 | 44 | 43 | 166 | 42 | 2 |

Note: (1) The greater the rank, the greater is the values of the organizational values and OCI Scores.
(2) The Total Rank is the summation of the ranks of the four scales of organizational values.
(3) Banding Subdivision 1 = Band 1.0 -1.4; Banding Subdivision 2 = Band 1.5-1.9.

Among the four scales of organizational values of schools, emphases on cultural linkage and loose coupling were the most consistent strategies among the three excellent schools, tight coupling the next, but the emphasis on bureaucratic linkage was quite diverse. This phenomenon matched the researcher's findings in a study of the recursive relationship between organizational values and teachers' feelings about school life that cultural linkage and loose coupling were found to have positive effects on teachers' feelings of commitment and job satisfaction and sense of community (Pang, 1996). Thus it was not surprising that the three excellent schools would emphasize these strategies strongly in running these schools. Since tight coupling had a positive direct effect on sense of community and a positive indirect effect on job satisfaction, there were two excellent schools (Nos. 18 and 14) that emphasized tight coupling strongly and one (No. 8) moderately. Similarly, since bureaucratic linkage had negative effects on sense of community and job satisfaction, not all excellent schools used this strategy to the same extent. There were two excellent schools (Nos. 18 and 14) that emphasized bureaucratic linkage strongly while the other excellent school (No. 8) emphasized it much less.

In summary, the empirical findings of this study were found to be consistent with Sergiovanni's (1984) belief based on the observations and interpretation of the effective schools literature that excellent schools were both tightly coupled and loosely coupled. However, this study shows that excellent schools were strong in cultural linkage but not

necessarily in bureaucratic linkage. This finding is partly contradictory to Firestone and Wilson's suggestions (1985).

*Characteristics of Organizational Cultures in Excellent Schools*

The profiles of the OCI scores (Figure 3) and organizational values (Figure 5) of the 44 schools in Hong Kong indicate that each school is unique and has its own culture. They also show that the three excellent schools had strong cultures but the cultures were not identified to each other. What then were their cultures?

Table 3 and Figure 6 show that schools Nos. 18 and 14 were more or less the same in terms of their emphases on organizational values. The cultures in these two excellent schools were that they were strong in both bureaucratic linkage and cultural linkage and were both tightly and loosely coupled, although in varying degrees. Organizational values in these two schools were extensively shared and teachers in them well accepted this type of culture. However, school No. 8 was quite distinct from these two excellent schools in that it did not emphasize bureaucratic linkage at all and was only moderately strong in tight coupling. That is, School No. 8 relied heavily on cultural linkage and loose coupling as the strategies in the management of the school to bind people together. Thus the major distinctive feature between school No. 8 and the other two excellent schools was their varying degrees of emphasis on bureaucratic linkage, with the former stressing it weakly and the other two stressing it strongly. Nevertheless, all of them were strong in cultural linkage and loose coupling.

Fredison (1986, p.141) claimed that the minimal characteristic of the professional organization is autonomy, or the freedom to employ discretion in the workplace. Thus according to the characteristics of excellent school No. 8, it can be claimed that it was a professional organization in which teacher autonomy, professional orientation, participation and collaboration, collegiality, and communication and consensus were highly valued. The control structure in school No. 8 was that teachers were allowed extensive autonomy in exercising their competence and teachers in this school were treated as professionals who had a high degree of discretion in their professional practices, but the bureaucratic control and structure was kept to a minimum level. On the other hand, in addition to the characteristics of school No. 8, school Nos. 18 and 14 were also strong in bureaucratic linkage and tight coupling. It can be claimed that school Nos. 18 and 14 were both bureaucratic and professional organizations in which formality, bureaucratic control, bureaucratic rationality, achievement orientation and goal orientation were highly valued as well. Thus two distinctive types of school cultures can be identified in the three excellent schools in Hong Kong: the "professional" culture and the "bureaucratic-professional" culture.

One may further ask that which type of the identified school cultures is better when being replicated in other schools' management structures. It is hard to determine such an issue, since both types of cultures were found in excellent schools. Regardless of their differences in organizational values, all of the three excellent schools had strong cultures. That is, no matter what were their organizational values, strong cultures are the most important factor leading them to be excellence

## Conclusions

Karl Weick (1976, 1982) used the phrase loose coupling to describe the ways in which schools are organized. Weick (1982, p.675) argued that one of the reasons for ineffectiveness in schooling is that schools are managed with the wrong theory in mind and he suggested that effective school administrators in loosely coupled schools need to make full use of symbol management to tie together the system. Regarding the loose properties of schools suggested by Weick, Firestone and Wilson (1985) posited that besides the bureaucratic linkages that already existed in schools, effective school principals should use cultural linkages to bind people together. Furthermore, based on Peters and Waterman's (1982) studies on the America's best-run corporations and school excellence literature, Sergiovanni (1984, p.13) believed that excellent schools are not only loosely coupled but also tightly coupled. Thus the suggestions by Firestone and Wilson (1985) and Sergiovanni (1984) make many researchers and practitioners in educational administration believe that effective schools are strong in both bureaucratic linkage and cultural linkage and that excellent schools are both tightly coupled and loosely coupled. The research findings of this study are congruent with Sergiovanni's belief but partly contradictory to Firestone and Wilson's suggestions.

The research has sought evidence to support that bureaucratic linkage, cultural linkage, tight coupling and loose coupling are the important and distinct organizational forces that existed in schools to bind people together (Pang, 1998). Among the four scales of organizational values of schools, emphases on cultural linkage and loose coupling were the most consistent strategies among the three identified excellent schools, tight coupling the next, but emphasis on bureaucratic linkage was quite diverse. Thus this study shows that excellent schools are both tightly coupled and loosely coupled--consistent with Sergiovanni's belief, and that excellent schools are strong in cultural linkage but not necessarily strong in bureaucratic linkage—partly contradictory to Firestone and Wilson's suggestions. All the existing evidence leads to the conclusion that cultural linkage, tight coupling and loose coupling are the strong forces that bind people together within schools, but bureaucratic linkage is not necessarily the same.

This study succeeded in identifying two distinctive organizational cultures in the excellent schools of Hong Kong: "professional" culture and "bureaucratic-professional" culture. In the excellent school (No. 8) with a professional culture, teachers enjoyed a great deal of freedom and discretion in their teaching and administrative activities and they were treated as professionals who were self-controlled and norm-driven. In that sense, the school's hierarchical and bureaucratic structure and rules and regulations were and could be kept to minimum. One the other hand, the other two excellent schools (Nos. 18 and 14) were identified with a "bureaucratic-professional culture". That is, organizational bureaucracy and teaching professional were found to be compatible in the two excellent schools, which is an antithesis to the evidence in the literature. Some researchers (Corwin & Borman, 1988; Hoy & Miskel, 1991; Scott, 1981) have claimed that there exists in schools a basic conflict between professional values and bureaucratic expectations. Scott (1981, p.156) argued that it is a conflict between the teaching profession and the school organization arising from the incompatibility between professional expertise and autonomy and bureaucratic discipline and control. Corwin and Borman (1988, p.209-214) referred to it as the dilemma of control and autonomy in the school management. Teachers usually resent interference and directives from the administration and call for shared governance in schools (Hoy and Miskel, 1991, p.145). However, this study shows that there exists in excellent schools (Nos. 18 and 14) a

bureaucratic-professional culture in which both professionals and bureaucrats work together harmoniously. That is, the interaction between the school administrators (bureaucrats) and the teachers (professionals) in these schools were not constrained. The school administrators in these two excellent schools succeeded in accommodating the bureaucratic-professional conflicts by strengthening the schools' organizational cultures. Thus the findings in this study suggest that the characteristics of bureaucratic organization are compatible with a professional work group when strong organizational cultures exist in schools.

## References

Ainley, J., Reed, R., & Miller, H. (1986). *School Organization and the Quality of Schooling (ACER Research Monograph No.29)*. Hawthorn, Vic.: ACER.

Austin, G. R. (1979). Exemplary Schools and the Search for Effectiveness. *Educational Leadership, 37*(1), 10-14.

Beare, H., Caldwell, B. J., & Millikan, R. H. (1989). *Creating an Excellent School*. London: Routledge.

Campbell, D. & Crowther, F. (1991). What is an Entrepreneurial School? In F. Crowther and B. Caldwell (Eds.). *The Entrepreneurial School: A Handbook for Dynamic School Management*. Sydney: Ashton Scholastic.

Corwin, R. g. & Borman, K. M. (1988). School as Workplace: Structural Constraints on Administration. In J. B. Norman (Ed.). *Handbook of Research on Educational Administration, A Project of the American Educational Research Association*. New York: Longman, pp. 209-237.

Deal, T. E. & Kennedy, A. A. (1982). *Corporate Culture: The Rites and Rituals of Corporation Life*. Reading, MA: Addison-Wesley.

Education Department (1992). *An Outline of the Secondary School Places Allocation System (for the 1992/94 Cycle)*. Hong Kong: the Government Printer.

Firestone, W. A. & Wilson, B. L. (1985). Using Bureaucratic and Cultural Linkages to Improve Instruction: The Principal's Contribution. *Educational Administration Quarterly, 21*(2), 7-30.

Freidson, E. (1986). *Professional Powers: A Study of the Institutionalization of Formal Knowledge*. Chicago: University of Chicago Press.

Gardner, J. W. (1961). *Excellence: Can We Be Equal And Excellent Too?* New York: Harper & Row.

Honig, B. (1985). The Educational Excellence Movement: Now Comes the Hard Part. *Phi Delta Kappan, 66*(June), 675-681.

Hoy, W. K. & Miskel, C. G. (1991). *Educational Administration: Theory, Research and Practice (4th ed.)*. Singapore, McGraw-Hill.

Jöreskog, K. G., & Sörbom, D. (1989). *LISREL 7: A Guide to the Program and Applications* (2nd Ed.). Chicago: SPSS Inc.

Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Chicago: Scientific Software Int.

Lightfoot, S. L. (1983). *The Good High School*. New York: Basic Books.

McCormack-Larkin, M. & Kritek, W. J. (1982). Milwaukee's Project RISE. *Educational Leadership, 40*(3), 16-21.

Metherell, T. (1989). *Excellence and Equity: New South Wales Curriculum Reforms: A White Paper on Curriculum Reform in New South Wales Schools*. Sydney: The Ministry of Education and Youth Affairs.

Mitchell, J. T. & Willower, D. J. (1992). Organizational Culture in a Good High School. *Journal of Educational Administration, 30*(1), 6-16.

National Commission on Excellence in Education (1983). *A Nation at Risk*. Washington, DC: Government Printing Office.

Ouchi, W. (1981). *Theory Z: How American Business can Meet the Japanese Challenge*. Reading, MA: Addison-Wesly.

Pang, N. S. K. (1995a). The Development of the School Values Inventory. In R. Cotter & S. J. Marshall (Eds.), *Research and Practice in Educational Administration* (pp. 160-186). The ACEA Pathways Series No. 6. Hawthorn, Victoria: Australian Council for Education Administration.

Pang, N. S. K. (1995b). A LISREL Confirmatory Factor Analytic Model of Organizational Values of Schools in Hong Kong. Paper presented at the Seventh Post-graduate Students' and Lecturers' Research Seminar in Education Administration, organized by the Australian Council for Educational Administration, Sydney, July 1-2, 1995.

Pang, N. S. K. (1996). School Values and Teachers' Feelings: A LISREL Model. *Journal of Educational Administration, 34*(2), 64-83.

Pang, N. S. K. (1998). Forces That Bind School Organizations Together. *Journal of Educational Administration, 36*(4), forthcoming.

Pascale, R. J. & Athos, A. G. (1981). *The Art of Japanese Management*. New York: Simon & Schuster.

Peters, T. J. & Austin, N. (1985). *A Passion for Excellence: The Leadership Difference*. USA: Random House.

Peters, T. J. & Waterman, R. H. (1982). *In Search of Excellence*. New York: Harper & Row.

Principals' Report (1987). *Towards Excellence in Schools*. A report submitted to the Minister for Education, Singapore.

Scott, W. R. (1981). *Organizations: Rational, Natural, and Open System*. Englewood Cliffs, NJ: Prentice-Hall.

Sergiovanni, T. J. (1984). Leadership and Excellence in Schooling. *Educational Leadership, 41*(February), 4-14.

Silver, H. (1994). *Good Schools, Effective Schools: Judgments and Their Histories*. London: Cassell.

Timer, T. B. & Kirp, D. L. (1988). *Managing Educational Excellence*. New York: The Falmer Press.

Wayson, W. W., Mitchell, B., Pinnell, G. S. & Landis, D. (1988). *Up From Excellence: The Impact of the Excellence Movement on Schools*. Bloomington, Indiana: Phi Delta Kappa Educational Foundation.

Weick, K. E. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly, 21*, 1-19.

Weick, K. E. (1982). Administrating Education in Loosely Coupled Schools. *Phi Delta Kappan*, June, 673-676.

Wynne, E. A. (1981). Looking at Good School. *Phi Delta Kappan, 62*(5), 377-81.